

CLAIMS:

1. An indoor wheelchair comprising:
 - a carriage with a seat having left, right, front and back edges, a backrest, four carrying wheels (front left, front right, rear left and rear right), and
 - 5 supporting members connecting said seat to said carrying wheels;
 - a left and a right driving mechanisms mounted to said carriage, each driving mechanism including a manual driving wheel and a transmission connecting said manual driving wheel to one of the respective left and right carrying wheels (traction wheel), and having width defined between innermost
 - 10 and outermost surfaces of said driving mechanism, wherein
 - said wheelchair is free of elements occupying the space under said seat between said innermost surfaces of the driving mechanisms and between the rear carrying wheels so that said wheelchair can be rolled over a common toilet bowl in backward motion; and
 - 15 - the overall width of said wheelchair as defined between said outermost surfaces of the driving mechanisms allows passing of the wheel chair through a common bathroom door.
2. The indoor wheelchair of Claim 1, wherein each of said driving mechanisms further comprises a rigid, generally flat member supporting a shaft
- 20 of said manual driving wheel, said member extending in a substantially vertical plane under the respective left or right edge of said seat, said manual driving wheel being at the outer side of said rigid member and said transmission being at the inner side of said rigid member.
3. The indoor wheelchair of Claim 2, wherein said rigid member extends to
- 25 said traction wheel and supports a shaft of said traction wheel, said traction wheel being at the outer side of said rigid member.
4. The indoor wheelchair of Claim 1, further comprising armrests mounted to said carriage and disposed within said overall width.

5. The indoor wheelchair of Claim 4, wherein said armrests are configured so that a space remains between them and said backrest, said space facilitating operating the manual driving wheel.
6. The indoor wheelchair of Claim 4, wherein said driving mechanisms are
5 flush with or below the upper surface of said seat and said armrests are movable to a collapsed state flush with or below the upper surface of said seat so that a person may leave said seat sideways.
7. The indoor wheelchair of Claim 6, wherein said armrests have each a supporting leg and a tubular basis attached to said carriage, said leg being
10 telescopingly movable in said tubular basis.
8. The indoor wheelchair of Claim 1, wherein said seat has a central opening with a removable cover allowing use of toilet.
9. The indoor wheelchair of Claim 8, wherein said cover is movable between a horizontal closed position and a vertical open position by pivoting
15 downwards about an axis adjacent the front edge of said seat.
10. The indoor wheelchair of Claim 9, wherein said cover has a handle disposed under said front edge of said seat enabling pivoting of said cover while a person is seated in said seat.
11. The indoor wheelchair of Claim 10, wherein said cover further has a
20 locking means for fixing thereof in said closed position.
12. The indoor wheelchair of Claim 11, wherein said locking means is formed as a bolt integral with said handle, said bolt extending perpendicular to said front edge of the seat under said cover to the back edge of the seat, said handle with said bolt being adapted to slide forward and backward, said seat
25 further having a socket under said back edge adapted to receive said bolt so that when said bolt is in backward position and is received in said socket said cover is firmly fixed to said seat, and when said bolt is in forward position out of said socket, said cover is free for pivoting by means of said handle.
13. The indoor wheelchair of Claim 1, wherein said transmission is encased
30 in a watertight housing.

14. The indoor wheelchair of Claim 13, wherein said wheelchair is made of water resistant and non-corrosive materials or coatings such that said wheelchair can be used by a person while taking shower.

15. The indoor wheelchair of Claim 1, further having brakes operating on either or both front and rear carrying wheels.

16. The indoor wheelchair of Claim 1, wherein said wheelchair is adapted to be assembled from four modules: said seat, said backrest, and left and right subcarriages, each subcarriage including the respective driving mechanism, carrying wheels and supporting members.

10 17. A driving mechanism for indoor wheelchair, comprising a manual driving wheel with a shaft, a traction wheel with a shaft, a transmission connecting said manual driving wheel to said traction wheel and a rigid member supporting at least the shaft of the manual driving wheel, wherein

- said driving mechanism is configured for mounting to or is integral with
15 left or right side of said wheelchair, with said traction wheel on the floor and said manual driving wheel adjacent the seat of said wheelchair, above the floor;

- said rigid member is generally flat and extends in a vertical plane at the respective side of said wheelchair; and

- said transmission is at the inner side of said rigid member with respect to
20 said wheelchair while said manual driving wheel is at the outer side.

18. The driving mechanism of Claim 17, wherein said rigid member extends towards said traction wheel so as to screen said transmission from the outer side thereof.

19. The driving mechanism of Claim 18, wherein said rigid member extends
25 to said traction wheel and supports said shaft of the traction wheel, the traction wheel being at the outer side of said rigid member.

20. The driving mechanism of Claim 19, wherein said wheelchair has a generally horizontal member associated with said seat and a generally vertical leg, and said rigid member is adapted to be mounted to said horizontal member
30 and to said vertical leg so as to form a rigid triangle therewith.

21. The driving mechanism of Claim 19, wherein said rigid member is a generally flat shell with ribs.
22. The driving mechanism of Claim 21, further comprising a generally flat internal cover mountable to said flat shell at the inner side of said transmission so
5 as to form a rigid closed shell.
23. The driving mechanism of Claim 22, wherein said rigid closed shell has sealing elements and is designed as water-tight housing.
24. The driving mechanism of Claim 17, wherein said driving mechanism has an innermost surface and an outermost surface with respect to said
10 wheelchair and is configured so that said wheelchair with two such driving mechanisms mounted thereon has an overall width defined between the outermost surfaces of the two driving mechanisms, said overall width allowing passage of said wheelchair through a common bathroom door.
25. The driving mechanism of Claim 24, wherein said driving mechanism is
15 configured so that said wheelchair with two such driving mechanisms mounted thereon has free space under said seat defined between the innermost surfaces of said driving mechanisms, said free space allowing rolling of said wheelchair over a common toilet bowl.
26. The driving mechanism of Claim 17, wherein said driving mechanism
20 has an innermost surface and an outermost surface with respect to said wheelchair and is configured so that a width of said driving mechanism defined between said innermost and said outermost surface does not exceed 8 cm.
27. The driving mechanism of Claim 17, wherein said transmission is one or more of the following: chain-and-sprocket transmission, toothed-belt
25 transmission, belt transmission, gear transmission.
28. The driving mechanism of Claim 17, wherein said mechanism is adapted for mounting and delivery as a module attachable to and detachable from said wheelchair by simple fastening means.
29. The driving mechanism of Claim 17, wherein said traction wheel is a
30 front wheel of said wheelchair.